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EVALUATION OF THE STRATEGIC AND ECONOMIC SIGNIFICANCE OF ITEMS ON THE CHINA DIFFERENTIAL TRADE CONTROLS LIST

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S-E-C-R-E-T

EVALUATION OF THE STRATEGIC AND ECONOMIC SIGNIFICANCE OF ITEMS ON THE CHINA DIFFERENTIAL TRADE CONTROL LISTS

INTRODUCTION

The total economic effect of the China differential trade controls is considered below in Part A; the effect of the individual differential list items on the economy of Communist China is discussed in Part B below.

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Part A

The Economic Impact of Differential International Trade Controls on Communist China

The differential trade controls now applied to Communist China do not have a significant impact on its economy. With some few exceptions, items of Western origin on the differential lists are not denied Communist China because they can be procured and transshipped from European Soviet Bloc countries to Communist China. However, the differential control system does increase Communist Chinese shipping costs because it denies Communist China the use of Western vessels and necessitates more costly rail shipments for the transport of goods which are on the differential lists even when the majority of such goods are of Soviet Bloc origin. It is currently estimated that the increased procurement and transportation costs caused by the differential trade and shipping controls incurred by Communist China in 1955 totaled approximately US $40 million. This amount is equivalent to less than 3% of the total amount currently allocated to industrial and transportation investment in the Chinese budget. It is apparent from Table 1 below that increased shipping costs accounted for approximately 80% of the estimated cost increase to Communist China:

TABLE I

ESTIMATED COSTS OF CHINCOM DIFFERENTIAL CONTROLS TO THE SINO-SOVIET BLOC*

1955

(Millions of $US)

TO CHINA		
Increased Transport Costs:		
External (in foreign exchange)	$10	
Internal	22	
		$32
Premium Payments		8
TOTAL CHINA		$ 40
TO USSR		
Increased Transport Costs		$ 58
TO EUROPEAN SATELLITES		
Increased Transport Costs		7
TOTAL		$105

* An alternative estimate places the costs of Chincom differential controls at $30 million to China and $80 million to the Sino-Soviet Bloc. The variation in estimates is due solely to a judgment as to whether USSR crude petroleum is shipped to China via tank cars rather than tanker as a consequence of differential controls or as a practical means of moving crude from the Second Baku area to the Far East. Soviet officials have stated that bulky cargoes should be shipped by sea wherever possible in order to reduce rail shipment costs, and since the rail shipment of crude is costly both to the USSR and China, the additional costs imposed by controls have been included in this estimate. It is estimated that China will probably produce enough domestic crude oil by the end of 1957 to employ fully available refining capacity and this item will no longer be significant.

In addition to the costs indicated above, differential controls create delays and difficulties to the Communist Chinese in their obtaining of imports. In the case of high-priority goods these delays and difficulties have unquestionably had some negative impact on Chinese production. The effects of this impact cannot be estimated, but they are thought to be minor.

Furthermore, Communist Chinese export earnings may be reduced as a result of the operation of CHINCOM controls.* The principal trading partner with whom this would be of some quantitative importance is Japan. It is estimated that during 1955 Chinese exports to Japan could have been from $25-$35 million greater without a significant diversion of resources from other commitments if Japan had been permitted to export to China goods under embargo. This continuing limitation on Communist Chinese exports to Japan, however, apparently results primarily from a Chinese political decision to limit exports to Japan because of Japanese adherence to the CHINCOM control system, and is not a necessary consequence

* The United States unilaterally prohibits the import of all goods from Communist China. The loss of Chinese export earnings resulting from United States import controls is estimated at approximately $60 million in 1955. Also, the U.S. limitation on the transfer of remittances will result in a further loss of foreign exchange estimated at $40 million during 1955. No country other than the United States maintains such controls.

of that system. Therefore, this reduction of Communist Chinese export earnings is not a direct cost imposed on China by the differential control system, although it is in a sense an effect of that system. Because it is not a direct cost, it is not included in the total of costs summarized in Table 1 above.

In summary, it is estimated that in the long run, neither the annual nor the cumulative cost of differential controls will significantly retard the development of the Chinese economy.

PART B

Individual Items on Chincom Differential Trade Control Lists

The individual items on the differential control list which consist of items on the consolidated China Special List and on International Lists II and III, have been reviewed utilizing the following criteria:

a. that the circumvention of the differential controls imposes a significant economic cost on Communist China,

b. that the item while available to Communist China by transshipment from the West is in extremely short supply in the Bloc as a whole,

c. that the item is under quantitative control to the USSR and Eastern Europe and consequently is of somewhat limited availability to Communist China.

Items which meet one or more of the three criteria noted above and also are of strategic and economic importance to Communist China are listed in Annex A.

Not included in Annex A are the large number of differentially controlled items of varying degrees of strategic and economic importance to Communist China but which are currently available to Communist China either from the rest of the Bloc or by transshipment from the West. However, included in the differential control lists are some hundred items which are of least strategic or economic importance to Communist China. These items are listed in Annex B. Items listed in both Annex A and B for which the Japanese have expressed an interest in having removed from the control lists are noted.

DISCUSSION OF ITEMS ON DIFFERENTIAL CONTROL LISTS WHICH ARE IMPORTANT TO CHINA AND FOR WHICH THE CIRCUMVENTION OF CONTROLS IMPOSES A SIGNIFICANT ECONOMIC COST

1. Metal Working Machinery

ITEM #	DESCRIPTION
C-001	
I/L-2002	High precision (fine) boring machines, production types only, capable of an accuracy of 0.0005 inch (0.015 mm. or better).
I/L-2003	Horizontal combination boring, drilling, and milling machines (horizontal boring machines).
I/L-2052	Planing machines, planer milling machines, and combination planer and planer milling machines, with capacity for work pieces 48 inches up to but not including 72 inches wide .....
I/L-2070	Forging hammers, as follows: (a) having a falling weight of 3 tons up to and including 6 tons, (b) steam, air or mechanical hammers of rated sizes 2.5 tons up to and including 5 tons.
I/L-2074	Forging machines as follows: (a) forging machines capable of operating on bar stock of a diameter exceeding 3.5 inches, (b) forging roll machinery.
I/L-3011	Internal cylindrical grinding machines, mechanical or hydraulic feed, production types only.
I/L-3012	Combined internal and external cylindrical grinding machines.
I/L-3018	Crankshaft, crankpin and camshaft grinders, with capacity for shafts 48 inches long or over.
I/L-3067	Metal cutting and working tools (not incorporating diamonds) for machine operations as follows: (a) broaching tools, (b) gear cutting tools, (c) forging roll sets.
I/L-3072	Presses, mechanical and hydraulic with rated pressures 1000 tons or less.

Communist China has not attempted to procure the above machine tools, however, it is thought that she will attempt to procure them in the foreseeable future. These machine tools are tools used to manufacture other machine tools or machines. Production of these tools requires a long lead time and Bloc procuremont of these tools from the Free World on behalf of China is not considered feasible. It is estimated that Chinese procurement of these tools will materially advance the Chinese industrial economy. Comments on each individual machine tool are listed below:

I/L-2002 (C-001)	None are known to be produced in China, and Soviet Bloc production is believed to be inadequate.
I/L-2003 (C-001)	It is recommended this item be retained in sizes of 125 mm. and above. The Chinese are probably producing these machines in sizes to 110 mm.
I/L-2052 (C-001)	Not produced in China, and USSR output is considered insufficient.
I/L-2070 (C-001)	Overall Bloc shortage.
I/L-2074 (C-001)	Overall Bloc shortage.
I/L-3011 (C-001)	Not produced in China. Production of the USSR and East Germany is believed to be inadequate.
I/L-3012 (C-001)	Same as I/L-3011.
I/L-3018 (C-001)	Believed to be in short supply in the Bloc. Particularly useful in the construction and repair of small vessels suitable for coastal transport of materials and personnel.
I/L-3067 (C-001)	Believed to be in short supply in the Bloc.
I/L-3072 (C-001)	Overall Bloc shortage, except it is believed that for greatest strategic significance this item could be limited to presses with rated pressures of 500 to 1,000 tons.

2. Chemical and Petroleum Equipment

I/L-2129 (C-131)	Pump (except vacuum pumps and those pumps covered by items 1131 (a) and 1131 (c) delivering liquids separately or in combination with solids and/or gases and having all flow contact surfaces made of 10 percent or more chromium or nickel.
I/L-2133	Pipe valves and cocks having all flow contact surfaces made of 10 percent or more chromium or nickel.....

Transshipment from the European Soviet Bloc of the above equipment is not thought practical because this equipment is specially designed for specific purposes. Soviet Bloc production of above equipment is recognized, but it is considered to be in short supply, of inadequate quality, and lacking generally the technological advances attained in Western countries in recent years. Availability of non-Bloc made goods incorporating latest advances, fabricated from materials generally superior to those presently available in the Bloc, plus accessibility to ample stocks of spare parts, and technical advice, will materially assist Chinese accomplishment of industrial objectives in this area, and can result in advancing by several years the development of production of chemical and petroleum products having peacetime uses, but in many cases invaluable in support of military operations.

3. Electrical and Power Generating Equipment

C-266	Electrical power station equipment.
C-270	Turbines above 300 HP.

Much of the equipment defined by C-266 and C-270 is heavy and bulky, and difficult to transship. In addition, the problem of procuring and installing such technical equipment indirectly from the producer, through an intermediary, is often of such a magnitude as to become impractical.

The domestic supply of these items is entirely inadequate in China. Planned expansion of heavy industry is resulting in an increasing requirement for such commodities. Although Bloc producers offer occasional export of electrical generating equipment to non-Bloc customers, these products are still in general short supply, especially in some of the European Satellites. Despite this situation, China is dependent currently upon producers in the USSR and two or three of the European Satellites.

4. General Industrial Equipment

C-306 Tinning units, electrolytic - automatic continuous.

This item is not spelled out in List I but has been interpreted to fall into the category of rolling mill equipment. Electrolytic tinning lines are very difficult to manufacture and particularly to install. There is no electrolytic tinning line of the American type known to be installed anywhere within the Sino-Soviet Bloc. The USSR had on order two such lines from Davey-United, Ltd., but manufacture was stopped under the above interpretation. Availability of item C-306 would permit the Bloc to produce better tin plate and enable the saving of .5 to .75 lbs. of tin per base box produced.

5. Chemical and Petroleum Products

I/L-3768 Crude petroleum.

It is estimated that Communist China imported in excess of 200,000 tons of crude petroleum by rail from the USSR in 1955. If control of crude petroleum were discontinued, China could import crude by tanker at a saving of about 10 million over estimated current costs. There is no indication that the overland movement of crude from the "Second Baku Area"

to China would immediately cease. However, by the end of 1957 China will probably produce sufficient quantities of domestic crude oil to employ available refining capacity and the need for imported crude oil will therefore be greatly reduced.

ADDITIONAL ITEMS, WHICH ALTHOUGH AVAILABLE TO COMMUNIST CHINA BY TRANSSHIPMENT FROM THE WEST, ARE IN SHORT SUPPLY IN THE BLOC AS A WHOLE

1. Metals, Minerals and Their Manufactures

3652 Copper and copper-base alloy semifinished and finished products as follows:

a. wire (uncovered)

b. cable (uncovered)

c. insulated wire (single strand conductor), of a diameter of 0.014 inch (0.35 mm) or less.

It is obvious that the control on copper in other forms is being defeated by ordering copper in the form of wire. While intelligence estimates have not been completed, current indications are that the Bloc imported approximately 50,000 tons of copper wire in 1955. Since copper in all forms is in critically short supply in Communist China, and since copper is vital to the expansion of its military and industrial potential, imports of wire and cable from the West will materially aid the carrying out of Communist China's plans for development.

C-605 - Transformer and choke laminations and core assemblies, n.e.s. made of the following materials:

(1) Nickel and nickel base alloys

(2) Electrical steel sheet or strip with a core loss of 0.59 watts per lb. (1.3 watts per kg.) or less at 10,000 gausses and 50 cycles per second and with a thickness of 0.02 inch (0.5 mm) or less.

Although this item is partially covered on List I as item 1631, there is a difference in the definition of the electrical sheet. Item C-605 specifies a core loss of .59 watts per lb. or less at 10,000 gausses, whereas item 1631 specifies a core loss of .5 watts per lb. or less at 13,000 gausses. Both are top grade electrical sheets and very difficult to manufacture. It is believed that electrical sheets of these qualities are not now manufactured by any Bloc country.

C-655 - Mercury. This metal is believed to be in inadequate supply in the Sino-Soviet Bloc.

2. Other Electronics and Precision Instruments

C-505 Coaxial electric cable of all types, n.e.s., suitable for the transmission of frequencies of 100 or more kilocycles per second.

Item C-505 is of strategic importance to Communist China. Under the definitions of IL-I Item 1525, a variety of "low-loss" types of cable are subject to embargo.

However, coaxial cables not covered by Item 1525 include a majority of the solid-dielectric radio-frequency cables as listed in our current Army-Navy Standard List, the total production of which is very significant as compared to the embargoed "low-loss" types.

The principle applications of such cables, as would be covered under C-505, are radar and military communications systems, particularly at the very high frequencies and above.

It is reported that the Bloc production of all categories of coaxial cable has been, and continues to be, less than demand, with active attempts to import still continuing.

3. Transportation Equipment

C-450 Motor vehicles and equipment as follows:

(a) Motor vehicles n.e.s.

(b) Chassis, components, and parts, n.e.s.

(c) Servicing equipment and material n.e.s.

There exists a large vehicle park in China which is composed of U.S. vehicles taken over by Communist forces. There are indications that the greater portion of these vehicles that have not been scrapped or otherwise destroyed are inoperable because of a critical lack of spare parts. Essential electric components such as distributors, regulators and batteries are not available for these vehicles. Fuel pumps and carburators are also in short supply.

Estimates on the size of the Communist Chinese motor park and the number of Western manufactured trucks and vehicles are not firm but there are indications that possibly as many as 10,000 vehicles of Western manufactures could be put into service if spare parts were freely available. Acquisition of these parts would allow the Chinese to reactivate these vehicles in a short time with a relatively small capital investment.

It is impractical to embargo only spare parts for these vehicles. Also, China would probably welcome the opportunity to purchase Western type heavy duty 6-10 ton capacity trucks.

If this item were available from the West, China would within a relatively short time shift part of its procurement to the West or would try to expand total procurement of motor vehicles to include a supply from the West.

2415 - Other Vessels

Expansion of the merchant fleet is one of the important targets of the Chinese Communist planning in the five-year period, 1953-1957. Present plans call for expansion of the ocean-going merchant fleet by at least 400,000 gross tons. This would increase the size of the present fleet by more than 100 percent. At the present rate of domestic construction, the Chinese Communists cannot nearly meet this target. Their only hope is acquisitions from outside sources. Domestic construction of large ocean-going merchant ships, excluding junks, is presently negligible. In view of what is known of Chinese Communist planning, it is reasonable that the goal of 400,000 tons of merchant shipping to be added to the fleet, reflects Chinese estimates of actual requirements. There is much evidence of insufficient capacity in merchant shipping. For example, even though contrary to Chinese laws of cabotage, foreign merchant fleet vessels now transport a portion of China's domestic coastal trade. The Chinese tanker and dry cargo fleets are believed insufficient to meet even minimum requirements for coastal transport

thereby throwing a heavy burden on the rail system. In the past year, for example, it is known that cargoes have been hauled by rail all the way from Manchuria to South China and vice versa, apparently because of insufficient domestic tonnage for its transport.

2416 - Fishing vessels and hulls therefor.

3416 - Fishing vessels as specified.

Fishing vessels of the types included in 3416 and 2416 should be closely restricted because of the obvious utility in case of hostilities. Such tonnage acquired abroad could very easily be armed and used in case of war. The utility of the Japanese fishing fleet in World War II is one of the best proofs of the potential utility of a modern fleet of such vessels. It should be noted, furthermore, that the fishing vessels under consideration in this discussion are considerably different from the junk type vessels now being supplied by domestic construction.

3481 - Automatic (block type) railway signal systems.

This equipment permits an increase in the capacity of railroad lines which is far greater than would result from a similar investment in almost any other item of railroad equipment. The Soviet Union seems to have insufficient block signal equipment for its own needs. The only signals in China installed by the Communists to date are on the Peiping-Tientsin line and the Trans-Mongolia line; these were imported from the Soviet Bloc. It is not certain, however, that these signals are automatic block.

The significance of automatic block signals is indicated by a Soviet book on railroad transportation which states that the capacity of a double-track line with telegraph communications is up to 48 pairs of trains a day; but with automatic block signaling the capacity is increased up to 144 pairs a day (Khachaturov, Osnovy..., p. 338). The cost of installing automatic block signaling to obtain this significant increase in capacity is small compared with the installation of additional tracks to achieve a similar increase.

It is to be noted that China's railroads are now operating at high density, but that large increases in traffic are planned for the near future. The pressure for installation of automatic block signals, and the benefits to be derived from such installation will therefore increase.

4. Chemicals

3715 - Boric Acid and Borates

This commodity is currently being reviewed for possible up-grading to IL-I because of its strategic significance. The supply in the Sino-Soviet Bloc is not believed to be adequate.